

From glowbugs@theporch.com Sat May 4 22:28:45 1996
Return-Path: glowbugs@theporch.com
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com
(8.7.5/AUX-3.1.1) with SMTP id WAA27755; Sat, 4 May 1996 22:26:13 -0500 (CDT)
Date: Sat, 4 May 1996 22:26:13 -0500 (CDT)
Message-Id: <199605050326.WAA27755@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 178
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: 0

GLOWBUGS Digest 178

Topics covered in this issue include:

- 1) Re: Could there be a 1-tube superhet?
by Carl Ratner <artdeco@bway.net>
- 2) Re: Could there be a 1-tube superhet?
by John Kolb <jlkolb@cts.com>
- 3) Re: Could there be a 1-tube superhet?
by mjsilva@ix.netcom.com (michael silva)
- 4) Re: World's Simplest Field Strength Meter
by Bill Turner <wrt@eskimo.com>
- 5) Re: Could there be a 1-tube superhet?
by Steve Ellington <n4lq@iglou.com>
- 6) Re: Could there be a 1-tube superhet?
by Kevin Pease <hamradio@mm1001.theporch.com>
- 7) Re: Could there be a 1-tube superhet?
by "Deane D McIntyre" <dmcintyr@acs.ucalgary.ca>
- 8) Odd(Very Odd) Tubes FS
by DMedley@gnn.com (David MEDLEY)

Date: Fri, 3 May 1996 23:52:14 -0400 (EDT)
From: Carl Ratner <artdeco@bway.net>
To: glowbugs@theporch.com
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <2.2.16.19960503235427.1fe794f2@bway.net>

At 04:42 PM 5/3/96 -0500, Jeff proposed a fascinating project...

>But here's a question: Is it possible to build a 1-tube superhet??
Some of
>those late-era compactrons had a LOT of stuff in them. Suppose we used a
>signal diode for the detector. Is there a Compactron (or any multipart
>tube) with enough guts to be a superhet all by its lonesome? That
would be
>one HELL of a cool project.
>
>You could do without an RF amp and AGC. You'd still need an oscillator
>section, a mixer section (or one converter section) plus an IF amp and an
>audio amp. Without requiring speaker volume you would need only one audio
>stage. To me that sounds just barely possible. Anybody got a complete
>listing of Compactron tubes? Is there a bottle with the balls to
pull it off?
>
>I've never yet built a tube superhet. This one I would make time to
build.
>

Ummmm, how are we going to deal with the power supply for this little
beast and not use a second tube as a rectifier? Lots of batteries?
Sneak a sillycon diode in there?

Can't find much on Compactron tubes amongst my stuff. Have to dig a
little deeper in the old files.

--73--

Carl

Date: Fri, 3 May 1996 21:54:30 -0700 (PDT)
From: John Kolb <jlkolb@cts.com>
To: Jeff Duntemann <jeffd@coriolis.com>
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <Pine.SCO.3.91.960503215000.1684A-100000@sd.cts.com>

> Deane said:
>
> But here's a question: Is it possible to build a 1-tube superhet?? Some of
> those late-era compactrons had a LOT of stuff in them. Suppose we used a
> signal diode for the detector. Is there a Compactron (or any multipart

> tube) with enough guts to be a superhet all by its lonesome? That would be
> one HELL of a cool project.
>

I remember something called, I think, a reflex circuit, where a single tube was used as two or more functions at the same time. Using suitable tuned circuits and coupling circuits could easily amplify RF or IF and audio, without them interacting.

John Kolb KK6IL jlkolb@cts.com

Date: Sat, 4 May 1996 01:53:53 -0700
From: mjsilva@ix.netcom.com (michael silva)
To: glowbugs@theporch.com
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <199605040853.BAA10551@dfw-ix10.ix.netcom.com>

>But here's a question: Is it possible to build a 1-tube superhet??
>Some of
>those late-era compactrons had a LOT of stuff in them. Suppose we used a
>signal diode for the detector. Is there a Compactron (or any multipart
>tube) with enough guts to be a superhet all by its lonesome? That
>would be
>one HELL of a cool project.

My first reaction was "can't be done", but then I remembered that a superhet doesn't -have- to have an IF amp (they do the conversion, but they immediately go into the detector) -- some of the late '30s/'40s projects, as well as some old broadcast band receivers, didn't use them. From that I come up with a triple-triode (6U10) with one section as mixer, one as oscillator and one as audio amp. Ah, compactrons -- the hollow-state IC...

73,
Mike, KK6GM

Date: Sat, 04 May 1996 02:11:12 -0700
From: Bill Turner <wrt@eskimo.com>
To: rdkeys@csemail.cropsci.ncsu.edu,
Subject: Re: World's Simplest Field Strength Meter

Message-ID: <199605040911.CAA19315@mail.eskimo.com>

At 12:15 PM 5/3/96 -0500, rdkeys@csemail.cropsci.ncsu.edu wrote:

>Another treasure surfaced from the bilges.....

>

>

>

>-----
>WORLD'S SIMPLEST FIELD STRENGTH METER

>-----

-snip-

I have an even simpler one... whenever my rig is tuned to maximum output, my neighbor calls. No circuitry at all! :-)

73, Bill W7LZP
wrt@eskimo.com

Date: Sat, 4 May 1996 09:10:37 -0400 (EDT)
From: Steve Ellington <n4lq@iglou.com>
To: Carl Ratner <artdeco@bway.net>
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <Pine.GS0.3.92.960504090436.14019B-100000@iglou>

Are direct conversion receivers a form of superhet. There's no I.F stage but the principle of mixing the incoming RF to produce a common frequency is being used. If so, using one tube would be a snap. All you need is a mixer and high gain af amp. I haven't seen cw reception mentioned in this thread and this would provide the means to receive it. For example, in the D.C. process, we would set our mixer/osc at 3500.7kc in order to receive a cw signal on 3500.00kc This would produce a 700cps beat note which could be amplified (a lot) for us to hear in our headphones.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

Date: Sat, 4 May 1996 11:01:45 -0500 (CDT)
From: Kevin Pease <hamradio@mm1001.theporch.com>
To: Steve Ellington <n4lq@iglou.com>
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <Pine.LNX.3.91.960504110019.10946A-100000@mm1001.theporch.com>

How about a mixer, oscillator, and regenerative detector feeding headphones. That should work. Wasn't there a compactron with a tetrode and two triodes ? The tetrode as the mixer and triodes as oscillator and detector.

Kevin Pease
WB0JZG Mount Juliet, TN.

Date: Sat, 4 May 1996 12:36:13 -0600
From: "Deane D McIntyre" <dmcintyr@acs.ucalgary.ca>
To: glowbugs@theporch.com
Subject: Re: Could there be a 1-tube superhet?
Message-ID: <9605041836.ZZ42882@ds1.acs.ucalgary.ca>

In message <199605040853.BAA10551@dfw-ix10.ix.netcom.com> writes:

>
> >But here's a question: Is it possible to build a 1-tube superhet??
> >Some of
> >those late-era compactrons had a LOT of stuff in them. Suppose we
> used a
> >signal diode for the detector. Is there a Compactron (or any
> multipart
> >tube) with enough guts to be a superhet all by its lonesome? That
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> My first reaction was "can't be done", but then I remembered that a
> superhet doesn't -have- to have an IF amp (they do the conversion, but
> they immediately go into the detector) -- some of the late '30s/'40s
> projects, as well as some old broadcast band receivers, didn't use
> them. From that I come up with a triple-triode (6U10) with one section
> as mixer, one as oscillator and one as audio amp. Ah, compactrons --
> the hollow-state IC...

How about the 14BL11 and the 14BR11? These are three section tubes with a dual triode and sharp cutoff pentode. It is possible to use a pentode as a converter stage, some GE AA5's used a 12AU6 as a converter stage. Am not sure if the pentode section of a 14BL11 or 14BR11 would work as G3 in connected to the cathode internally in these tubes, not brought out to separate pins as in the 6/12AU6.

If the pentode section could be used as a converter, use one triode as the IF amp and the second triode as a grid-leak detector/audio stage. Viola, one tube superhet with IF amp!

I have heard that GE built prototypes of a "All American -2" which gave the performance of a AA5 using two compactrons. Am not sure if the rectifier is included in one of the tubes or if they used a sand diode.

The Loewe WG36 tube contained two pentodes and one triode. This tube, introduced about 1930 is described in Tyne's Saga of the Vacuum Tube (pp448-450).

73, Deane D McIntyre VE6BPO
dmcintyr@acs.ucalgary.ca

Date: Sat, 04 May 1996 20:01:51
From: DMedley@gnn.com (David MEDLEY)
To: glowbugs@theporch.com
Subject: Odd(Very Odd) Tubes FS
Message-ID: <199605042313.TAA17707@mail-e2b-service.gnn.com>

This box of stuff found in the back of my cupboard. Might be good for collectors maybe.

1. COVAB Continental Electric Co - Small PE cell
2. Western Electric WE-215-A Appears NIB
3. Marconi Radiotron 6AJ5- Appears NIB
4. Amperite type 64 ballast. Reads 114 ohms. In box.
5. Amperite 115C15 Delay Relay. Appears NIB
6. Amperite KL-45 ballast. Reads 170 ohms. In box
7. CBS Hytron 5348 NIB
8. 6J6 GE in box.
9. Arcturus blue 127 - Good filament.
10. LaFayette 27. Good filament.
11. Duresite Ballast. Reads 9.2 ohms
12. 4 Raytheon BH rectifiers. Condition unknown.
13. Unmarked ballast tube. Reads 177 ohms.
14. RCA 6099. You now know as much as I do!!
15. Unknown ballast tube. Reads 0.6 ohms.
16. 2 Philco 0Z4G condition unknown
17. 7 assorted photocells

Anyone interested in this bunch of weirdos e-mail me:
dmedley@gnn.com
Regards
Dave

David Medley

End of GLOWBUGS Digest 178
